

PIEZOELECTRIC CERAMIC COMPOSITION

Patent number: JP11228225

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Applicant: MURATA MANUFACTURING CO

Classification:

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europaen:

Application number: JP19980035713 19980218

Priority number(s): JP19980035713 19980218

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Abstract of JP11228225

PROBLEM TO BE SOLVED: To obtain a piezoelectric ceramic composition consisting mainly of potassium sodium lithium niobate, having a dielectric constant of ≤ 180 and the resonance frequency coefficient of thickness vibration of $>=3,000$ Hz.m so as to be suitable for using in high frequency region, and also having such favorable property as to be ≤ 100 ppm in the temperature coefficient of resonance frequency. SOLUTION: This piezoelectric ceramic composition consists mainly of a composition of the formula: $(1-n)(K1-xyNaxLi y)m(Nb1-zTaz)O3$ (wherein, M1 is a bivalent metal atom such as Mg, Ca, Sr, Ba or Pb; M2 is a tetravalent metal atom such as Ti, Zr, Sn or Hf; $x \leq 0.9$; $0.02 \leq y \leq 0.03$; $0.75 \leq (x+y)$; $0 \leq z \leq 0.3$; $0.98 \leq (m) \leq 1.0$; $0 < (n) \leq 0.05$).

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PIEZOELECTRIC CERAMIC COMPOSITION

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Inventor: KIMURA MASAHIKO; OGAWA TOMOYUKI; ANDO AKIRA

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Abstract of JP11228227

PROBLEM TO BE SOLVED: To obtain a piezoelectric ceramic composition consisting mainly of potassium sodium lithium niobate, having such favorable properties as to be $>=1,000$ in dielectric constant, $>=25\%$ in electromechanical coupling coefficient Kp , and >200 deg.C in Curie point. SOLUTION: This piezoelectric ceramic composition consists mainly of a composition of the formula: $(1-n)(K1-xyNaxLi y)m(Nb1-zTaz)O3$ (wherein, M1 is a bivalent metal atom such as Mg, Ca, Sr, Ba or Pb; M2 is a tetravalent metal atom such as Ti, Zr, Sn or Hf; $x \leq 0.3$; $(y) \leq 0.75$; $0 \leq z \leq 0.3$; $0.98 \leq (m) \leq 1.0$; $0 < (n) < 0.1$).

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